

AMENDMENTS TO THE CLAIMS

The following is a complete, marked-up listing of revised claims with a status identifier in parenthesis, underlined text indicating insertions, and strike through and/or double-bracketed text indicating deletions.

LISTING OF CLAIMS

1. (Currently Amended) A method for producing a heat exchanger element including a fibrous mat, wherein the fibrous mat has a thickness of at least 25mm and includes fibers which are interconnected by a bonding agent, and at least one heat exchanging conduit for a heat exchanging medium, wherein the heat exchanger element is panel shaped and includes two main surfaces averted from each other and a peripheral surface connecting the main surfaces, the method comprising:

applying to the fibrous mat having the thickness of at least 25 mm and including fibers interconnected by the bonding agent, at one main surface, at least one layer of a cast coating;

laying onto the fibrous mat ~~and the cast coating~~, at the one main surface, at least one heat exchanging conduit, wherein a thickness of the at least one cast coating layer is in the range of 2 to 8 mm and the at least one heat exchanging conduit is contained at least partially in the at least one cast coating layer, and wherein the at least one cast coating layer, together with the at least one heat exchanging conduit, adheres to the fibrous mat; and

curing the cast coating to form a cast mass.

2. (Previously Presented) Method as claimed in claim 1, wherein the cast mass includes at least a second layer of cast coating applied to the first layer of cast coating and the two

layers of cast coating include grain compositions, wherein the grain compositions of the two layers are different.

3. (Previously Presented) Method as claimed in claim 1, wherein the at least one layer of cast coating includes a grain composition and a bonding agent and the at least one layer of cast coating is cured to a substantially solid cast coating when the bonding agent is cured.
4. (Previously Presented) A heat exchanger element being panel shaped, including two main surfaces averted from each other and a peripheral surface connecting the main surfaces, comprising:
 - a fibrous mat, wherein the fibrous mat has a thickness of at least 25mm and includes fibers which are interconnected by a bonding agent;
 - at least one layer of a cast coating and at least one heat exchanging conduit for a heat exchanging medium at one main surface, wherein a thickness of the cast coating is in the range of 2 to 8 mm and the at least one heat exchanging conduit is contained at least partially in the cast coating, and wherein the cast coating together with the at least one heat exchanging conduit adheres to the fibrous mat.
5. (Previously Presented) Heat exchanger element as claimed in claim 4, wherein the at least one heat exchanging conduit includes at least two branch necks, and wherein each branch neck includes a flexible plastic pipe so that each branch neck is connectable to the branch neck of at least one of an adjacent heat exchanger element and to a connection conduit.
6. (Cancelled)

7. (Previously Presented) Heat exchanger element as claimed in claim 4, wherein the cast coating includes two layers with different grain compositions, a first layer adjacent to the fibrous mat and a second layer applied to said first layer, wherein the second layer includes a finer average grain size and is of a higher density than the first layer.
8. (Previously Presented) Heat exchanger element as claimed in claim 4, wherein the cast coating includes at least one of a thickness of 3 to 6 mm, and an aluminum hydroxide.
9. (Previously Presented) Heat exchanger element as claimed in claim 4, wherein the at least one cast coating layer includes grains of an average particle size in the range of 0.1 to 0.5 mm.
10. (Previously Presented) Heat exchanger element as claimed in claim 4, wherein the at least one heat exchanging conduit includes an inner diameter of 0.8 to 5mm and is formed of at least one of plastic material and of metal, at least in part.
11. (Previously Presented) Heat exchanger element as claimed in claim 4, wherein the heat exchanging conduit extends substantially tangentially to said peripheral surface.
12. (Previously Presented) A method for assembling heat exchanger elements including a fibrous mat, wherein the fibrous mat has a thickness of at least 25mm and includes fibers which are interconnected by a bonding agent, and at least one heat exchanging conduit for a heat exchanging medium, the heat exchanger elements being panel shaped and including

at least two main surfaces averted from each other and a peripheral surface connecting the main surfaces, the method comprising:

attaching at least two heat exchanger elements adjacent to each other, to a room delimiting surface;

connecting at least two branch necks of a heat exchanger element to a heat exchanger circuit; and

applying a cast mixture over the heat exchanger elements and the at least two branch necks so that a substantially flat cast surface is obtained, wherein a thickness of the cast coating is in the range of 2 to 8 mm and the at least one heat exchanging conduit is contained in the cast coating, and wherein the cast coating together with the at least one heat exchanging conduit, adheres to the fibrous mat.

13. (Previously Presented) Method as claimed in claim 12, wherein uncoated main surfaces of the fibrous mats are glued to said room delimiting surface, and in a first step, a first row of heat exchanger elements are fastened with their first lateral surfaces situated side by side, in a second step, holding elements are mounted to join the second side surfaces, in a third step, a second row of heat exchanger elements are fastened so as to join said holding elements and their first side surfaces engaging each other, in a fourth step, the two branch necks of each heat exchanger element are connected to a heat exchanger circuit, in a fifth step, a cast mixture is applied.

14. (Previously Presented) Method as claimed in claim 12, wherein uncoated main surfaces of the fibrous mats, for fastening the heat exchanger elements, are glued to said room delimiting surface, wherein in a first step, a first row of heat exchanger elements are fastened with their first lateral surfaces situated side by side, while spacer elements project from their second lateral surfaces, in a second step, a second row of heat exchanger elements, their first lateral surfaces engaging each other, are fastened so that they join said second lateral surfaces and are spaced by spacer elements, in a third step, the two branch necks of each heat exchanger element are connected to a heat exchanger circuit, in a fourth step, covering elements are arranged at the spacer elements, in a fifth step, a cast mixture is applied at least in regions with gaps.
15. (Previously Presented) Method as claimed in claim 12, wherein, for fastening on the room delimiting surface heat exchanger elements comprising a fibrous mat, a cast coating layer on one main surface of the fibrous mat, two parallel extending longitudinal channels each with a male and a female connector and at least one conduit that interconnects said longitudinal channels, the uncoated main surface of the fibrous mat of the heat exchanger element is glued to said room delimiting surface, at least one further heat exchanger element having a layer of glue at the uncoated main surface of the fibrous mat, which is oriented towards said room delimiting surface, is moved towards the heat exchanger element which has already been mounted, wherein during the movement the further heat exchanger element is tilted relative to the room delimiting surface, two male connectors are plugged into corresponding female connectors, and subsequently the connected further heat exchanger element is fixed on said room delimiting surface by the layer of glue.

16. (Previously Presented) Method as claimed in claim 2, wherein the at least one first layer of cast coating includes a relatively coarser grain composition and a relatively smaller density than the at least one second layer of cast coating.
17. (Previously Presented) Method as claimed in claim 2, wherein a grain composition of the at least one layer of cast coating is cured to a substantially solid cast coating when a bonding agent is cured.
18. (Cancelled)
19. (Previously Presented) Heat exchanger element as claimed in claim 4, wherein the fibrous mat has a thickness in a range of 30 mm and includes at least one of glass fibers, rock wool, silicate fibers and fibers of plastic material.
20. (Previously Presented) Heat exchanger element as claimed in claim 4, wherein the fibrous mat has a thickness in a range of 60 mm and includes at least one of glass fibers, rock wool, silicate fibers and fibers of plastic material.
21. (Previously Presented) Heat exchanger element as claimed in claim 4, wherein the at least one cast coating layer includes grains of an average particle size in the range of 0.25 to 0.3 mm.

22. (Previously Presented) Heat exchanger element as claimed in claim 4, wherein the at least one cast coating layer includes grains with particle sizes varying in the range of 0.1 to 0.5 mm.
23. (Previously Presented) Heat exchanger element as claimed in claim 4, wherein the at least one cast coating layer includes grains with particle sizes varying in the range of 0.2 to 0.4 mm.
24. (Previously Presented) Heat exchanger element as claimed in claim 4, wherein the at least one heat exchanging conduit is formed of metal, at least in part.
25. (Previously Presented) Method as claimed in claim 13, wherein in a sixth step, a flat surface is obtained by grinding, and in a seventh step, a cover coating is applied
26. (Previously Presented) Method as claimed in claim 14, wherein in a sixth step, a flat surface is obtained by grinding, and in a seventh step, a cover coating is applied
27. (Previously Presented) A room delimiting structure, comprising:
 - heat exchanger elements, each including
 - a fibrous mat, wherein the fibrous mat has a thickness of at least 25mm
 - and includes fibers which are interconnected by a bonding agent, and

at least one heat exchanging conduit for a heat exchanging medium, wherein the heat exchanger elements are panel shaped and include two main surfaces averted from each other and a peripheral surface connecting the main surfaces, wherein at least two heat exchanger elements are attached adjacently to each other to a room delimiting surface, at least two branch necks of each heat exchanger element are connected to a heat exchanger circuit, and a cast mixture is applied to the at least two heat exchanger elements and the at least two branch necks so that a substantially flat cast surface is obtained, wherein the thickness of the cast coating layer is in the range of 2 to 8 mm and the at least one conduit is contained in the cast coating, and the cast coating together with the at least one heat exchanging conduit adheres to the fibrous mat.